

CLAIMS:

What is claimed is:

1. A connector body for coupling between optical assemblies, comprising:

a body having opposing first and second surfaces;

5 the body including two pin bores extending from the first surface to the second surface,

the body further including an array of bores for carrying optical fibers between the first and second surfaces;

10 wherein the pin bores are adapted to receiving centering pins that protrude from the first and second surfaces, the centering pins facilitating attachment and alignment with mating assemblies.

2. The body according to claim 1:

wherein the array of bores is situated between the pin bores.

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3. The body according to claim 2, further comprising:

a pair of cavities, each cavity extending from a third surface of the body to a corresponding one of the pin bores and the cavities, each of the pair of cavities being isolated from the array of bores.

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4. The body according to claim 3, wherein each of the cavities is substantially rectangular in cross-section.

5. The body according to claim 3, further comprising a central cavity extending from the third surface of the body to the array of bores.

6. The body according to claim 2, further comprising a central cavity extending from a
5 third surface of the body to the array of bores.

7. The body according to claim 2, further comprising:

a beveled surface extending from the second surface toward the first surface, the beveled surface intersecting the second surface adjacent to the array of bores.

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8. The body according to claim 5, further comprising:

a beveled surface extending from the second surface toward the first surface and meeting the third surface, the beveled surface intersecting the second surface adjacent to the array of bores.

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9. A substrate for mating optical components with an optical connector body,
comprising:

a substrate for mounting active optical components, the substrate including at least two canals formed in a surface of the substrate and extending from an edge of the
20 substrate for receiving centering pins, wherein the centering pins are used to align and connect an optical connector body to the substrate.

10. The substrate according to claim 9, further comprising:

A horizontal emitting active optical component mounted to the substrate for transmitting at least one beam toward the edge of the substrate.

11. The substrate according to claim 9, further comprising:

5 a lens component mounted to the substrate between the edge emitting active optical component and the edge of the substrate for focusing at least one of the at least one beam.

12. The substrate according to claim 9, further comprising:

10 a vertical emitting active optical component mounted to the substrate adjacent to the edge for transmitting at least one beam.

13. The substrate according to claim 9, further comprising:

15 a monitoring diode mounted to the substrate adjacent to the edge for monitoring the transmitting of the at least one beam.

14. The substrate according to claim 9, further comprising:

 an active optical component mounted to the substrate for receiving at least one beam from the edge of the substrate.

20 15. The substrate according to claim 13, further comprising:

 a lens component mounted to the substrate between the active optical component and the edge of the substrate for focusing at least one of the at least one beam.

16. An optical assembly for mating optical fibers and terminating optical components, comprising:

a connector body having opposing first and second surfaces and two pin bores extending from the first surface to the second surface,

5 the body further including an array of bores extending between the first and second surfaces;

optical fibers positioned within at least some of the bores in the array of bores;

a substrate including at least two canals formed in a substrate surface and extending from an edge of the substrate;

10 centering pins positioned in the pin bores and the canals, the centering pins connecting the connector body to the substrate; and

an active optical component mounted on the substrate engaged in optical communication with at least some of the optical fibers.

15 17. The assembly according to claim 16, further comprising a cover positioned around the substrate.